

Technical Data

产品说明					
Trilliant™ HC X THC 1100 Natural	Trilliant™ HC high performance blends offer outstanding strength, durability and chemical resistance through the combination of Eastman Tritan™ copolyester with other various polymeric resins. Trilliant™ HC blends made with Tritan™ copolyester are available in standard grades or can be customized to meet specific performance requirements.				
Tritan™ TX1001	Eastman Tritan™ TX1001 is an amorphous copolyester with excellent appearance and clarity. Eastman Tritan™ TX1001 contains a mold release derived from vegetable based sources. Its most outstanding features are excellent toughness, hydrolytic stability, and heat and chemical resistance. This new-generation copolyester can also be molded into various applications without incorporating high levels of residual stress. Combined with Tritan™ copolyester's outstanding chemical resistance and hydrolytic stability, these features give molded products enhanced durability in the dishwasher environment, which can expose products to high heat, humidity and aggressive cleaning detergents. Tritan™ TX1001 copolyester may be used in repeated use food contact articles under United States Food and Drug Administration (FDA) regulations. Tritan™ TX1001 copolyester is certified to NSF/ANSI Standard 51 for Food Equipment Materials and is also certified to NSF/ANSI Standard 61 - Drinking Water System Components-Health Effects.				
Tritan™ TX2001	Eastman Tritan™ TX2001 is an amorphous copolyester with excellent appearance and clarity. Tritan™ TX2001 contains a mold release derived from vegetable based sources. Its most outstanding features are excellent toughness, hydrolytic stability, and heat and chemical resistance. This new-generation copolyester can also be molded into various applications without incorporating high levels of residual stress. Combined with Tritan™ copolyester's outstanding chemical resistance and hydrolytic stability, these features give molded products enhanced durability in the dishwasher environment, which can expose products to high heat, humidity, and aggressive cleaning agents. Tritan™ TX2001 copolyester may be used in repeated use food contact articles under United States Food and Drug Administration (FDA) regulations. Tritan™ TX2001 copolyester is certified to NSF/ANSI Standard 51 for Food Equipment Materials and is also certified to NSF/ANSI Standard 61 - Drinking Water System Components-Health Effects.				
Tritan™ TX1501HF	Eastman Tritan™ copolyester TX1501HF is a high flow grade of Eastman Tritan™. Eastman Tritan™ copolyester TX1501HF has viscosity reductions of 40-50% relative to Eastman Tritan™ copolyester TX1001. Eastman Tritan™ copolyester TX1501HF contains a mold release derived from vegetable based sources. Other outstanding features include good toughness, hydrolytic stability, and heat and chemical resistance. Eastman Tritan™ copolyester TX1501HF may be used in repeated use food contact articles under United States Food and Drug Administration (FDA) regulations. Eastman Tritan™ copolyester TX1501HF is certified to NSF/ANSI Standard 51 for Food Equipment Materials and is also certified to NSF/ANSI Standard 61 - Drinking Water System Components-Health Effects.				
Tritan™ TX1500HF	Eastman Tritan™ copolyester TX1500HF is a high flow grade of Eastman Tritan™. Eastman Tritan™ copolyester TX1500HF has viscosity reductions of 40-50% relative to Eastman Tritan™ copolyester TX1000. Other outstanding features include good toughness, hydrolytic stability, and heat and chemical resistance. Eastman Tritan™ copolyester TX1500HF may be used in repeated use food contact articles under United States Food and Drug Administration (FDA) regulations. Eastman Tritan™ copolyester TX1500HF is certified to NSF/ANSI Standard 51 for Food and Equipment Materials.				
总体	Trilliant™ HC X THC 1100 Natural	Tritan™ TX1001	Tritan™ TX2001	Tritan™ TX1501HF	Tritan™ TX1500HF
生产商/供应商	• 普立万公司	• Eastman Chemical Company	• Eastman Chemical Company	• Eastman Chemical Company	• Eastman Chemical Company
通用符号	• 共聚多酯	• 共聚多酯	• 共聚多酯	• 共聚多酯	• 共聚多酯
材料状态	• 已商用：当前有效	• 已商用：当前有效	• 已商用：当前有效	• 已商用：当前有效	• 已商用：当前有效
资料 ¹	• Technical Datasheet	• Processing - Injection Molding Guide (English) • Technical Datasheet (English)	• Processing - Injection Molding Guide (English) • Technical Datasheet (English)	• Technical Datasheet (English)	• Technical Datasheet (English)

总体	Trilliant™ HC X THC 1100 Natural	Tritan™ TX1001	Tritan™ TX2001	Tritan™ TX1501HF	Tritan™ TX1500HF
UL 黄卡 ²	--	• E118289-100074991	• E118289-100101424 • E338348-102664444	• E118289-100238009	• E118289-100194342
搜索 UL 黄卡	• 普立万公司 • Trilliant™ HC	• Eastman Chemical Company • Tritan™	• Eastman Chemical Company • Tritan™	• Eastman Chemical Company • Tritan™	• Eastman Chemical Company • Tritan™
供货地区	• 北美洲 • 非洲和中东 • 拉丁美洲 • 欧洲	• 北美洲 • 非洲和中东 • 拉丁美洲 • 欧洲 • 亚太地区	• 北美洲 • 非洲和中东 • 拉丁美洲 • 欧洲 • 亚太地区	• 北美洲 • 非洲和中东 • 拉丁美洲 • 欧洲 • 亚太地区	• 北美洲 • 非洲和中东 • 拉丁美洲 • 欧洲 • 亚太地区
添加剂	--	• 脱模	• 脱模	• 脱模	--
特性	• 抗撞击性，高 • 良好的流动性 • 良好的颜色稳定性 • 耐化学性良好 • 耐热性，中等 • 韧性良好 • 水解稳定	• 共聚物 • 抗撞击性，高 • 可加工性，良好 • 快的成型周期 • 耐化学性良好 • 耐热性，高 • 耐用性 • 清晰度，高 • 韧性良好 • 食品接触的合规性 • 水解稳定 • 脱模性能良好 • 外观良好 • 无定形的	• 共聚物 • 抗撞击性，高 • 可加工性，良好 • 快的成型周期 • 耐化学性良好 • 耐热性，高 • 耐用性 • 清晰度，高 • 韧性良好 • 食品接触的合规性 • 水解稳定 • 脱模性能良好 • 外观良好 • 无定形的	• 低粘度 • 抗撞击性，高 • 可加工性，良好 • 快的成型周期 • 流动性高 • 耐化学性良好 • 耐热性，高 • 耐用性 • 清晰度，高 • 韧性良好 • 食品接触的合规性 • 水解稳定 • 脱模性能良好 • 无定形的	• 抗撞击性，高 • 可加工性，良好 • 快的成型周期 • 流动性高 • 耐化学性良好 • 耐热性，高 • 耐用性 • 清晰度，高 • 韧性良好 • 食品接触的合规性 • 水解稳定
用途	• 薄壁部件 • 电器外壳 • 外壳 • 医疗/护理用品 • 医疗器材 • 医疗器械	• 大型家用电器和小型家用 电器 • 电器用具 • 家用货品 • 消费品应用领域	• 大型家用电器和小型家用 电器 • 电器用具 • 家用货品 • 消费品应用领域	• 电器用具 • 家用货品 • 消费品应用领域	• 电器用具 • 家用货品 • 消费品应用领域
机构评级	--	• FDA 食品接触, 未评级 • NSF 51 • NSF 61	• FDA 食品接触, 未评级 • NSF 51 • NSF 61	• FDA 食品接触, 未评级 • NSF 51 • NSF 61	• FDA 食品接触, 未评级 • NSF 51
形式	• 粒子	--	--	--	--
加工方法	--	• 注射成型	• 注射成型	• 注射成型	• 注射成型



物理性能	Trilliant™ HC X THC 1100 Natural	Tritan™ TX1001	Tritan™ TX2001	Tritan™ TX1501HF	Tritan™ TX1500HF	单位制	测试方法
比重	1.16	1.18	1.17	1.18	1.18	g/cm³	ASTM D792
熔 流 率 (熔 体 流 动 速 率) (260°C/5.0 kg)	22	--	--	--	--	g/10 min	ASTM D1238
收缩率							ASTM D955
流动	--	0.50 到 0.70	0.50 到 0.70	0.50 到 0.70	0.50 到 0.70	%	
流动 : 3.18 mm	0.58	--	--	--	--	%	
横向流动 : 3.18 mm	0.30	--	--	--	--	%	
机械性能	Trilliant™ HC X THC 1100 Natural	Tritan™ TX1001	Tritan™ TX2001	Tritan™ TX1501HF	Tritan™ TX1500HF	单位制	测试方法
拉伸模量							
-- ⁴	1560	--	--	--	--	MPa	ASTM D638
23°C	--	1550	1590	1580	1580	MPa	ASTM D638
23°C	--	1550	1620	1600	1600	MPa	ISO 527-2
抗张强度							
屈服 ⁵	40.0	--	--	--	--	MPa	ASTM D638
屈服, 23°C	--	43.0	44.0	43.0	43.0	MPa	ASTM D638
屈服, 23°C	--	43.0	45.0	44.0	44.0	MPa	ISO 527-2
断裂 ⁴	36.5	--	--	--	--	MPa	ASTM D638
断裂, 23°C	--	53.0	53.0	52.0	52.0	MPa	ASTM D638
断裂, 23°C	--	58.0	49.0	49.0	49.0	MPa	ISO 527-2
伸长率							
屈服, 23°C	--	6.0	7.0	7.0	7.0	%	ASTM D638
屈服, 23°C	--	7.0	7.0	7.0	7.0	%	ISO 527-2
断裂 ⁴	74	--	--	--	--	%	ASTM D638
断裂, 23°C	--	210	140	210	210	%	ASTM D638
断裂, 23°C	--	190	130	150	150	%	ISO 527-2
弯曲模量							
-- ⁶	1560	--	--	--	--	MPa	ASTM D790
23°C	--	1550	1590	1580	1580	MPa	ASTM D790
23°C	--	1500	1530	1500	1500	MPa	ISO 178
弯曲强度							
-- ⁶	72.4	--	--	--	--	MPa	ASTM D790
23°C	--	59.0	--	60.0	60.0	MPa	ISO 178
屈服, 23°C	--	62.0	66.0	64.0	64.0	MPa	ASTM D790



冲击性能	Trilliant™ HC X THC 1100 Natural	Tritan™ TX1001	Tritan™ TX2001	Tritan™ TX1501HF	Tritan™ TX1500HF	单位制	测试方法
悬壁梁缺口冲击强度							
23°C	--	980	650	860	860	J/m	ASTM D256
23°C, 3.18 mm, 注塑	960	--	--	--	--	J/m	ASTM D256A
-40°C	--	20	14	11	11	kJ/m²	ISO 180
23°C	--	93	66	83	83	kJ/m²	ISO 180
无缺口悬臂梁冲击 (23°C)	--	无断裂	无断裂	无断裂	无断裂		ASTM D4812
硬度	Trilliant™ HC X THC 1100 Natural	Tritan™ TX1001	Tritan™ TX2001	Tritan™ TX1501HF	Tritan™ TX1500HF	单位制	测试方法
洛氏硬度 (R 级, 23°C)	--	112	115	111	111		ASTM D785
热性能	Trilliant™ HC X THC 1100 Natural	Tritan™ TX1001	Tritan™ TX2001	Tritan™ TX1501HF	Tritan™ TX1500HF	单位制	测试方法
载荷下热变形温度							ASTM D648
0.45 MPa, 未退火	--	99.0	109	94.0	94.0	°C	
0.45 MPa, 未退火, 3.18 mm	95.0	--	--	--	--	°C	
1.8 MPa, 未退火	--	85.0	92.0	81.0	81.0	°C	
1.8 MPa, 未退火, 3.18 mm	80.0	--	--	--	--	°C	
线形热膨胀系数 - 流动 (-30 到 30°C)	7.1E-5	--	--	--	--	cm/cm/°C	ASTM D696
光学性能	Trilliant™ HC X THC 1100 Natural	Tritan™ TX1001	Tritan™ TX2001	Tritan™ TX1501HF	Tritan™ TX1500HF	单位制	测试方法
透射率 (总计)	--	90.0	92.0	91.0	91.0	%	ASTM D1003
雾度	--	< 1.0	< 1.0	< 1.0	< 1.0	%	ASTM D1003
注射	Trilliant™ HC X THC 1100 Natural	Tritan™ TX1001	Tritan™ TX2001	Tritan™ TX1501HF	Tritan™ TX1500HF	单位制	
干燥温度	--	88.0	88.0	88.0	88.0	°C	
干燥时间	--	4.0 到 6.0	4.0 到 6.0	4.0 到 6.0	4.0 到 6.0	hr	
加工 (熔体) 温度	--	260 到 282	260 到 282	260 到 282	260 到 282	°C	
模具温度	--	38.0 到 66.0	38.0 到 66.0	38.0 到 66.0	38.0 到 66.0	°C	

备注

¹ 通过这些链接您能够访问供应商资料。我们尽量保证及时更新资料；不过您可以从供应商处了解最新资料。
² UL 黄卡含有 UL 验证的易燃性和电气特性。UL Prospector 持续努力在 Prospector 中将黄卡链接至单个塑料材料，然而此列表可能未包括所有相应链接。重要的是，我们对 Prospector 中找到的这些黄卡和塑料材料之间的关联进行验证。如需完整的黄卡列表，请访问 UL 黄卡搜索。
³ 一般属性：这些不能被视为规格。
⁴ 类型 1, 51 mm/min
⁵ 51 mm/min
⁶ 13 mm/min



购买地点	
供应商	
Trilliant™ HC X THC 1100 Natural	普立万公司 Cleveland, OH USA 电话: 866-PolyOne Web: http://www.polyone.com/
Tritan™ TX1001	Eastman Chemical Company Kingsport, TN USA 电话: 800-327-8626 Web: http://www.eastman.com/
Tritan™ TX2001	Eastman Chemical Company Kingsport, TN USA 电话: 800-327-8626 Web: http://www.eastman.com/
Tritan™ TX1501HF	Eastman Chemical Company Kingsport, TN USA 电话: 800-327-8626 Web: http://www.eastman.com/
Tritan™ TX1500HF	Eastman Chemical Company Kingsport, TN USA 电话: 800-327-8626 Web: http://www.eastman.com/



分销商

Trilliant™ HC X THC 1100 Natural	请联系供应商以便为 Trilliant™ HC X THC 1100 Natural 查找分销商
Tritan™ TX1001	ALBIS Plastic ALBIS Plastic is a global distribution and compounding company. Contact ALBIS Plastic for availability of individual products per country. 电话: +49-40-78105-0 Web: http://www.albis.com/ 供货地区: Algeria, Austria, Belgium, Czech Republic, Denmark, Germany, Ireland, Luxembourg, Morocco, Netherlands, Norway, Russian Federation, Slovakia, Slovenia, Sweden, Tunisia, United Kingdom Amco Polymers 电话: 800-262-6685 Web: http://www.amcopolymers.com/ 供货地区: North America CCC Plastics 电话: 800-465-6917 Web: http://www.cccplastics.com/ 供货地区: Canada, United States Nexeo Solutions 电话: 888-594-6009 Web: http://www.nexeosolutions.com/ 供货地区: North America PolyOne Distribution PolyOne Distribution is a global distribution company. Contact PolyOne Distribution for availability of individual products by country. 电话: 800-894-4266 Web: http://polyonedistribution.com/ 供货地区: Global
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Tritan™ TX1500HF	ALBIS Plastic ALBIS Plastic is a global distribution and compounding company. Contact ALBIS Plastic for availability of individual products per country. 电话: +49-40-78105-0 Web: http://www.albis.com/ 供货地区: Algeria, Austria, Belgium, Czech Republic, Denmark, Germany, Ireland, Luxembourg, Morocco, Netherlands, Norway, Russian Federation, Slovakia, Slovenia, Sweden, Tunisia, United Kingdom Amco Polymers 电话: 800-262-6685 Web: http://www.amcopolymers.com/ 供货地区: North America CCC Plastics 电话: 800-465-6917 Web: http://www.cccplastics.com/ 供货地区: Canada, United States

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